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Inventor's Name: OZAWA
Application No.: NEW
Docket No.: 108075-00116

Fig.1 (Prior Art)

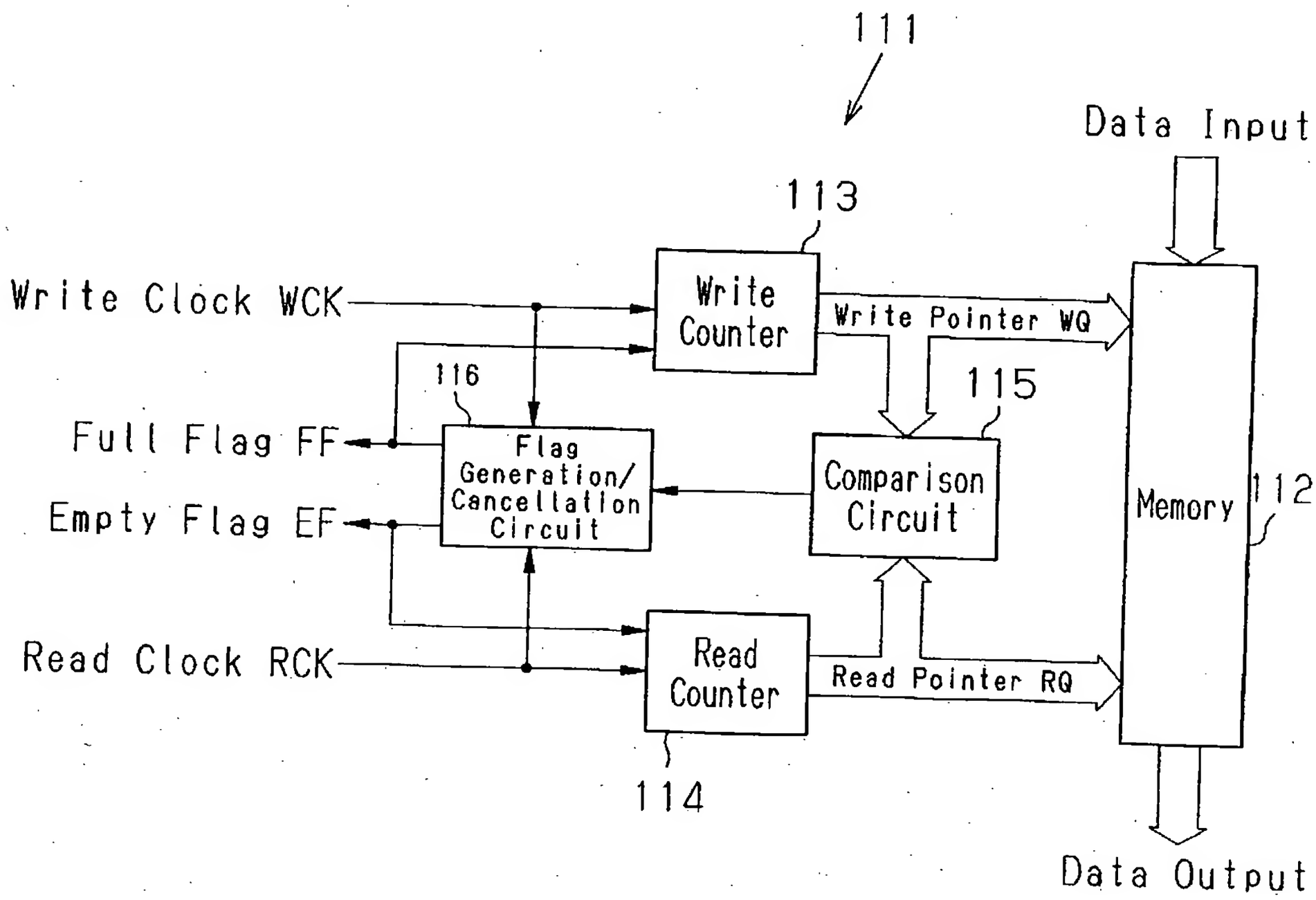

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Fig.2

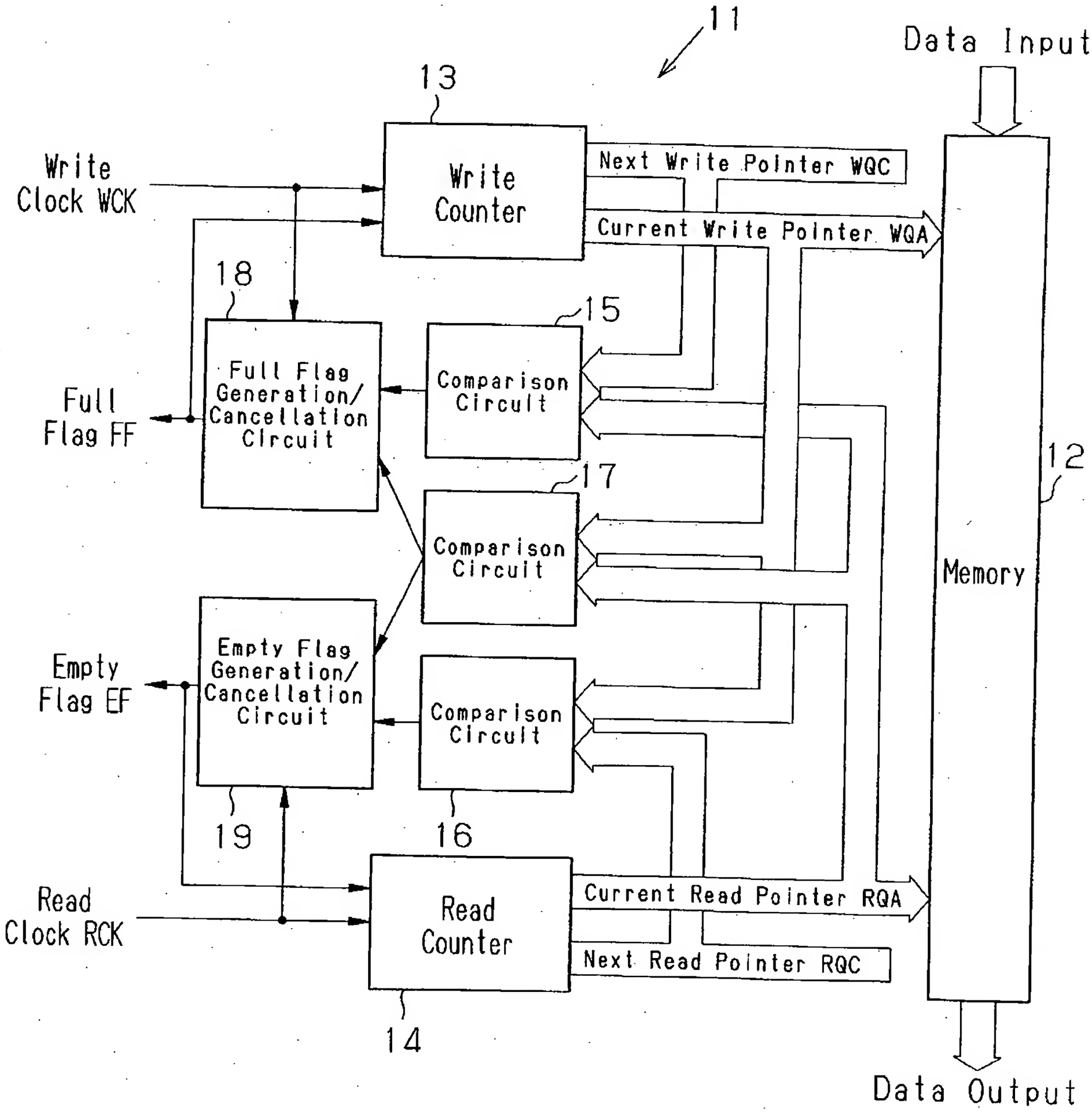

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Fig.3

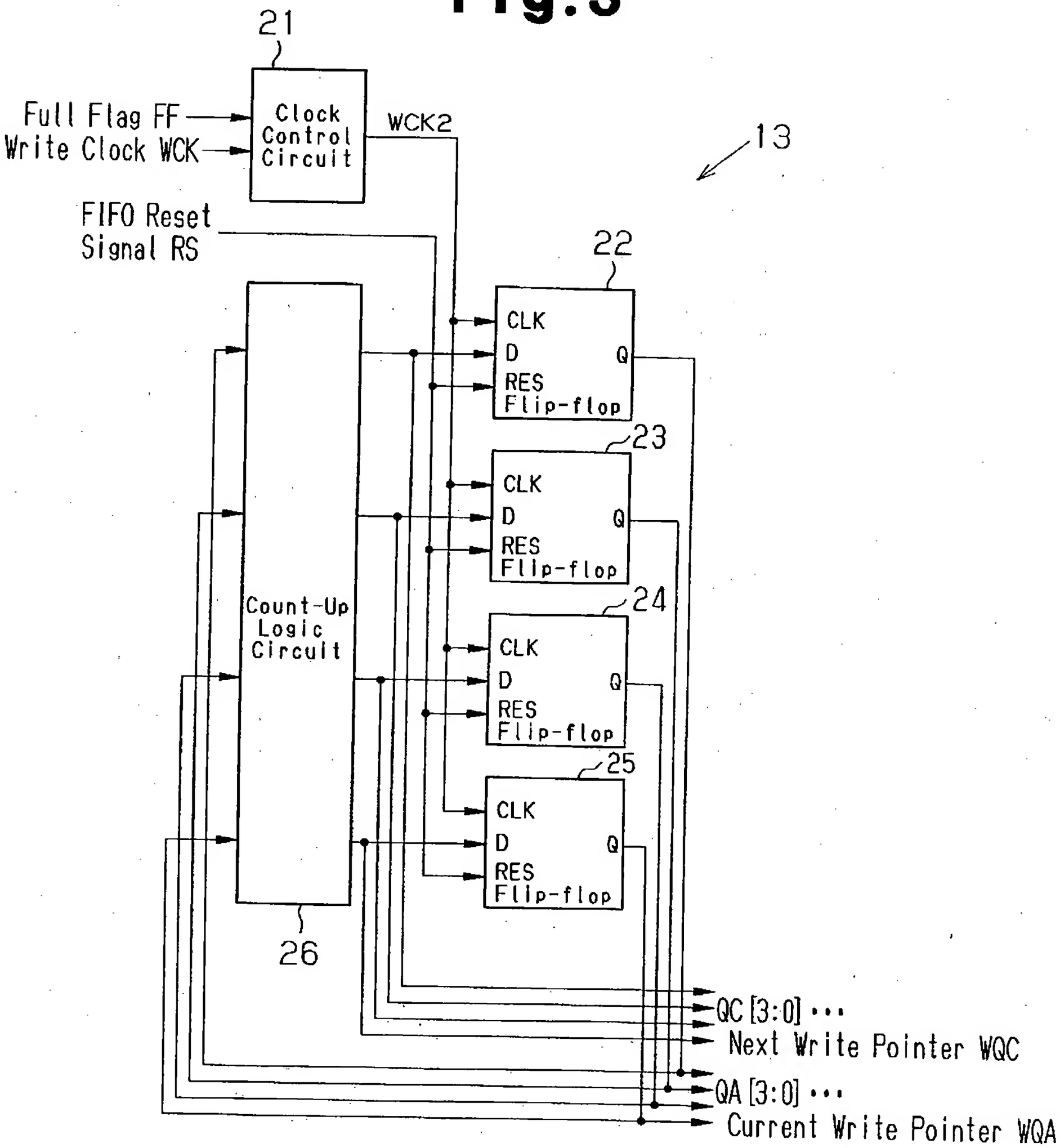

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Fig.4

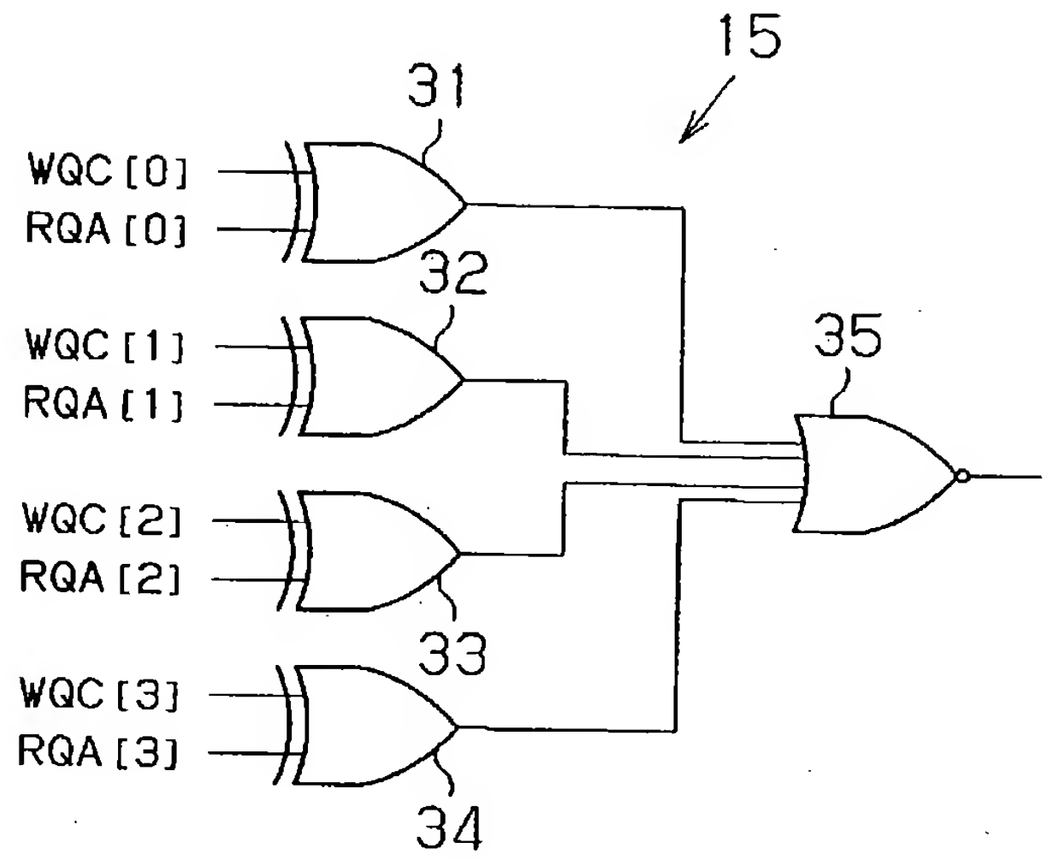

Fig.5

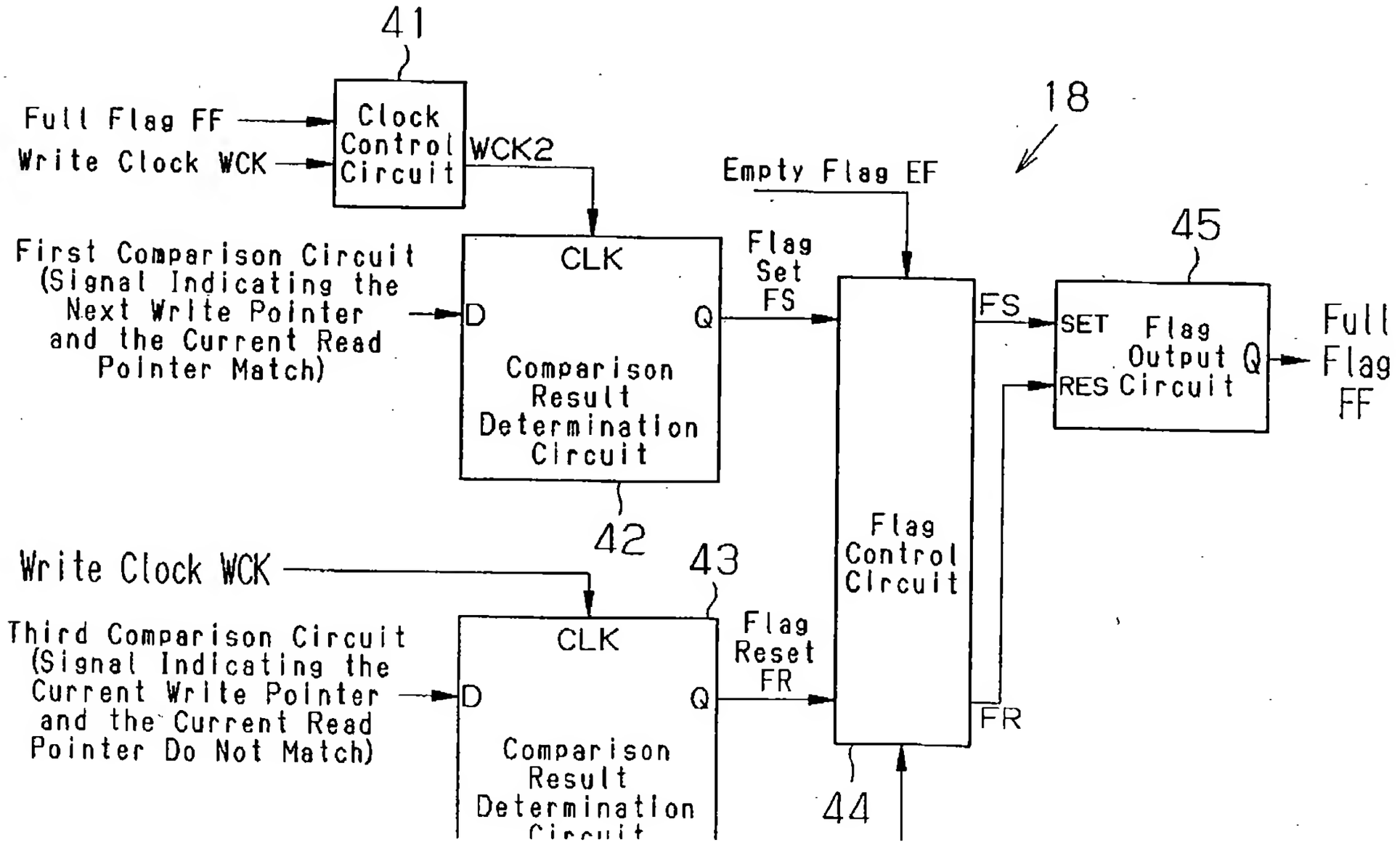

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Fig.6

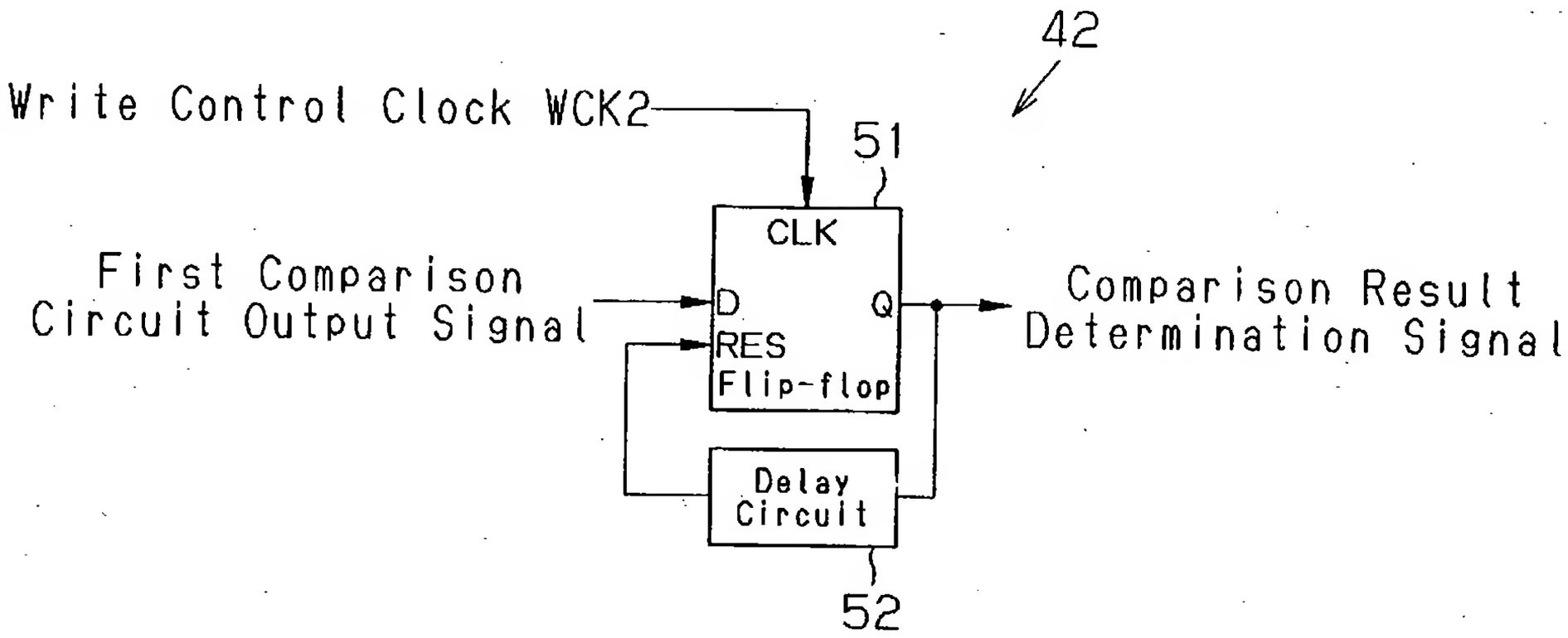

Fig.7

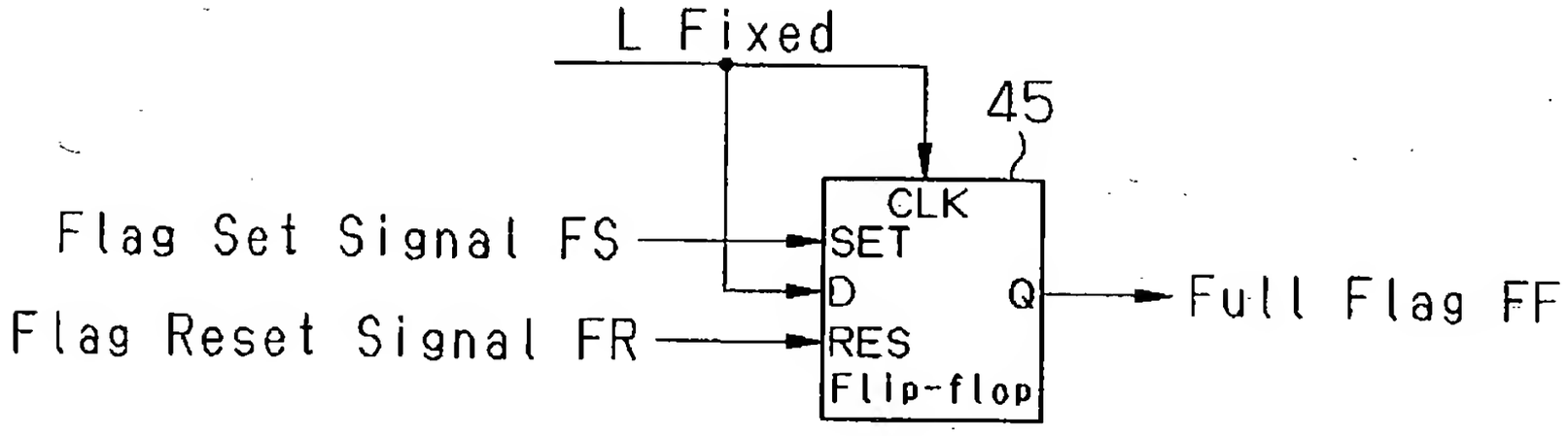

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Fig.8

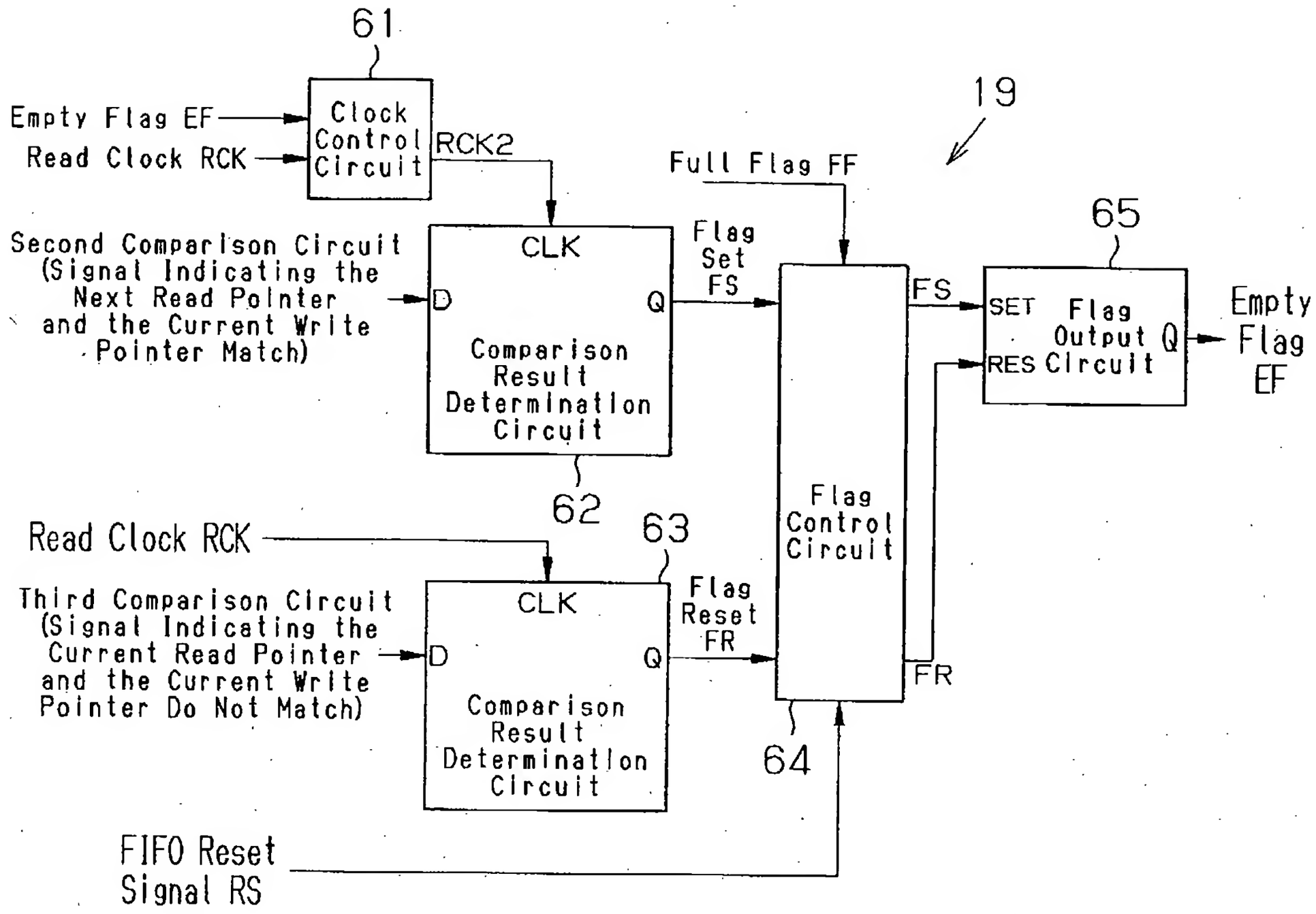

Fig.9

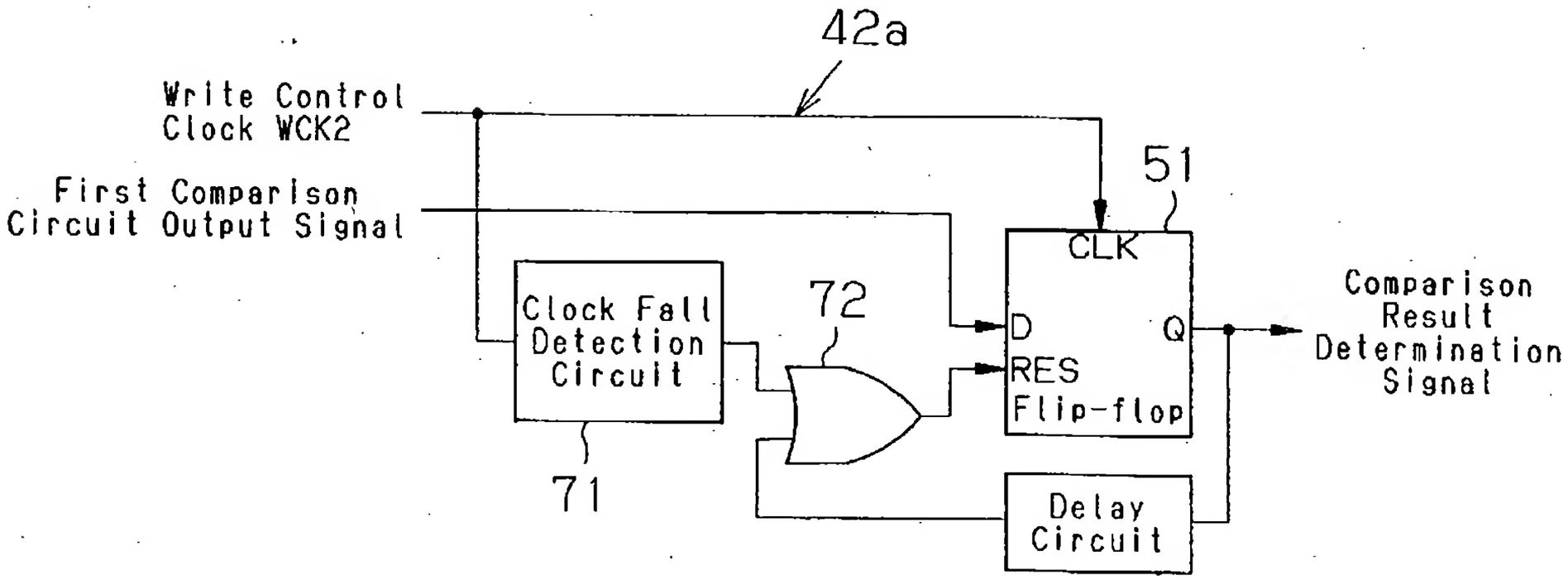

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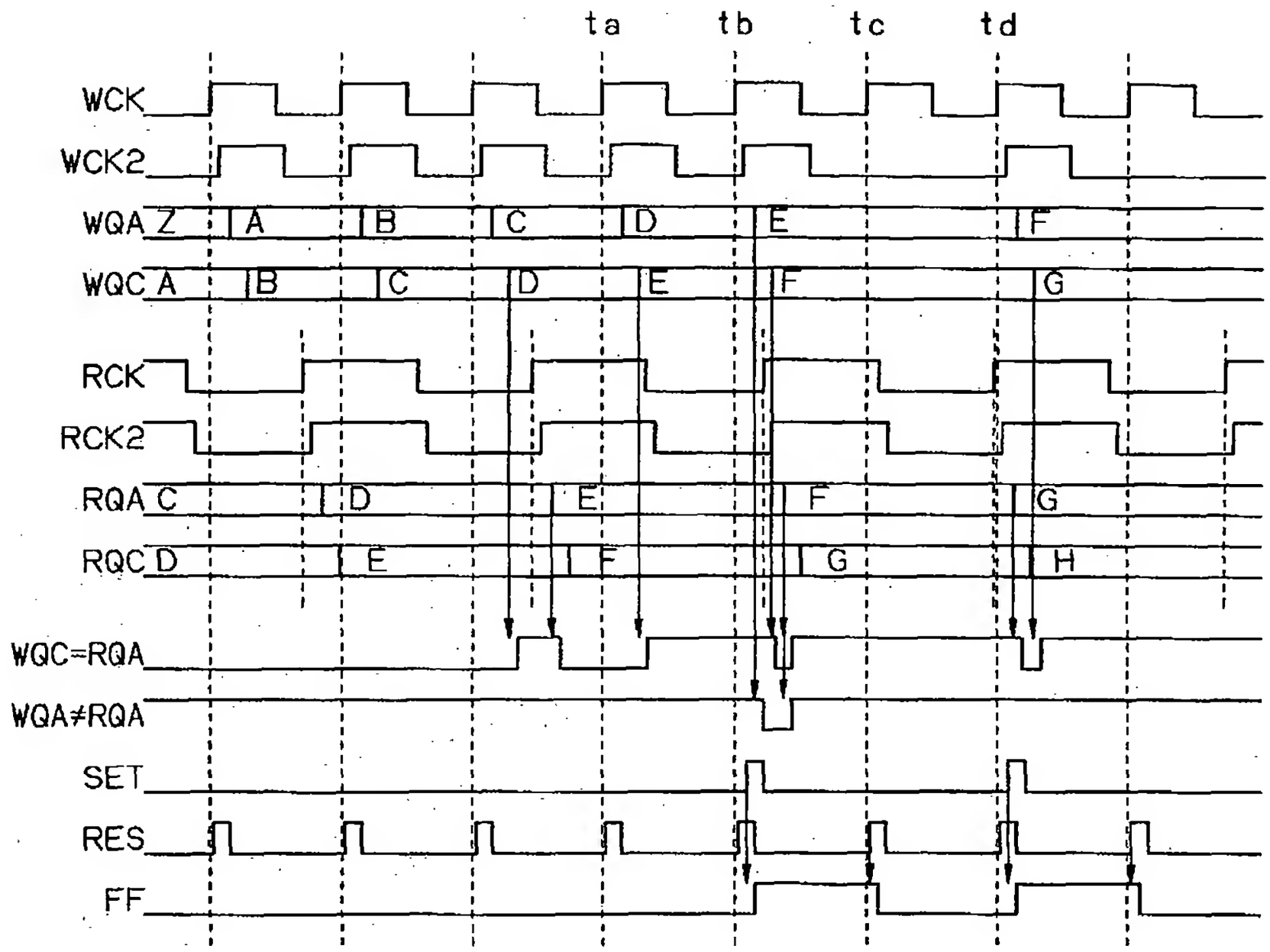
Fig.10



WCK Write Clock
WCK2 Write Clock Controlled by the Full Flag
WQA Current Write Pointer
WQC Next Write Pointer
RCK Read Clock
RCK2 Write Clock Controlled by the Empty Flag
RQA Current Read Pointer
RQC Next Read Pointer
WQC=RQA Signal Indicating the Next Write Pointer and the Current Read Pointer Match
WQA≠RQA Signal Indicating the Current Write Pointer and the Current Read Pointer Do Not Match
SET Flag Set Signal of the Full Flag Output Circuit
RES Flag Reset Signal of the Full Flag Output Circuit
FF Full Flag

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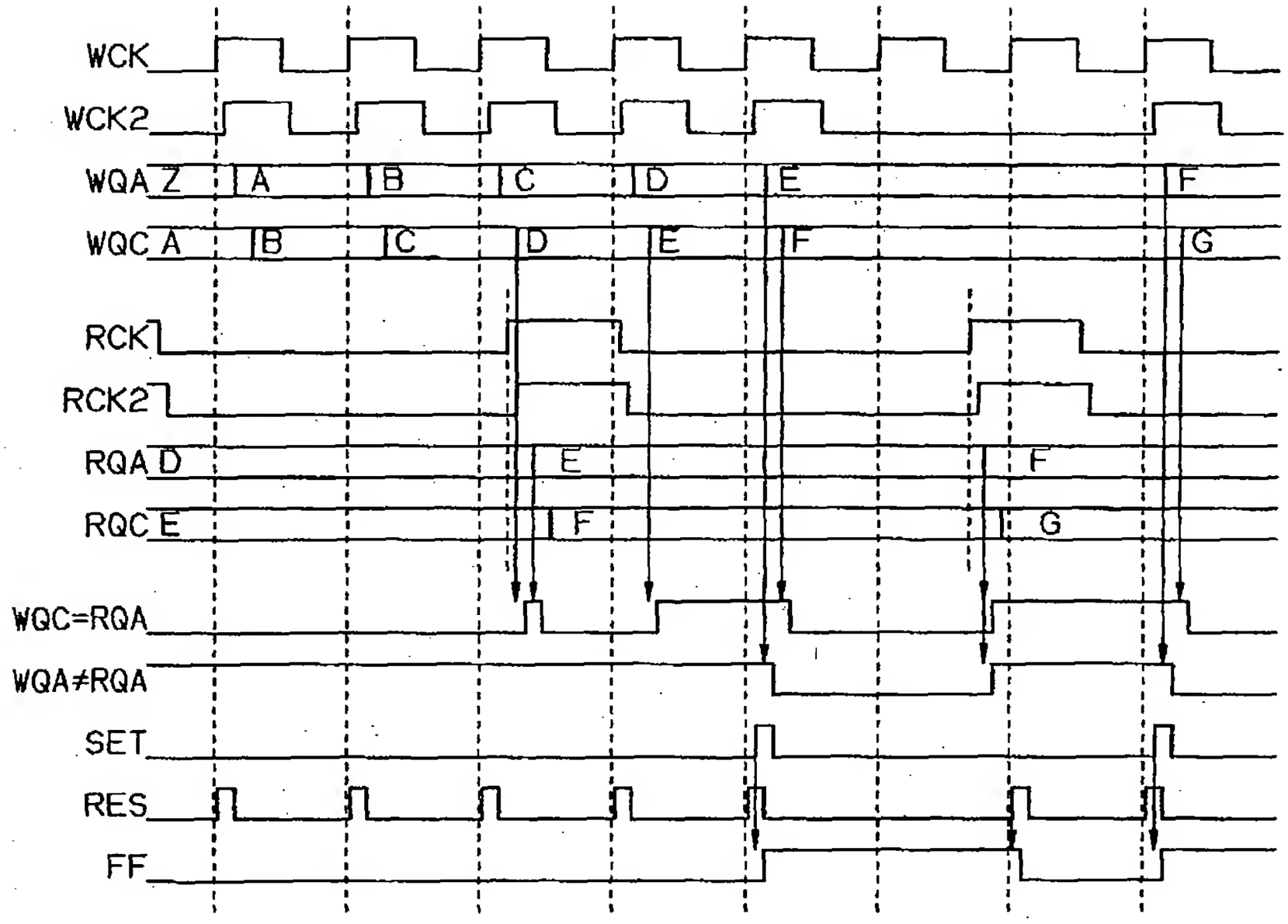
Fig.11



WCK Write Clock
WCK2 Write Clock Controlled by the Full Flag
WQA Current Write Pointer
WQC Next Write Pointer
RCK Read Clock
RCK2 Write Clock Controlled by the Empty Flag
RQA Current Read Pointer
RQC Next Read Pointer
WQC=RQA Signal Indicating the Next Write Pointer and the Current Read Pointer Match
WQA≠RQA Signal Indicating the Current Write Pointer and the Current Read Pointer Do Not Match
SET Flag Set Signal of the Full Flag Output Circuit
RES Flag Reset Signal of the Full Flag Output Circuit
FF Full Flag

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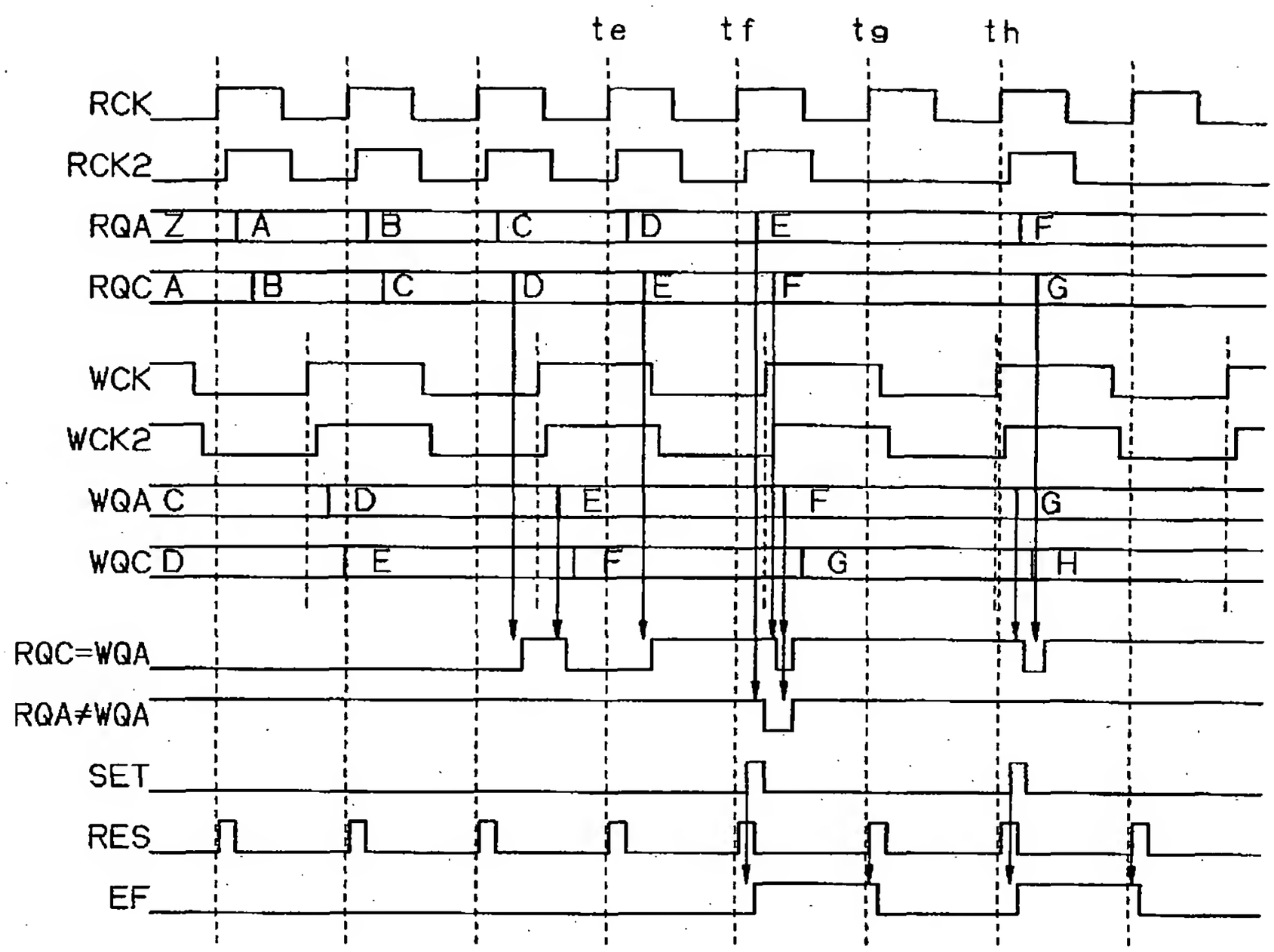
Fig.12



RCK	Read Clock
RCK2	Write Clock Controlled by the Empty Flag
RQA	Current Read Pointer
RQC	Next Read Pointer
WCK	Write Clock
WCK2	Write Clock Controlled by the Full Flag
WQA	Current Write Pointer
WQC	Next Write Pointer
RQC=WQA	Signal Indicating the Next Read Pointer and the Current Write Pointer Match
RQA≠WQA	Signal Indicating the Current Read Pointer and the Current Write Pointer Do Not Match
SET	Flag Set Signal of the Empty Flag Output Circuit
RES	Flag Reset Signal of the Empty Flag Output Circuit
EF	Empty Flag

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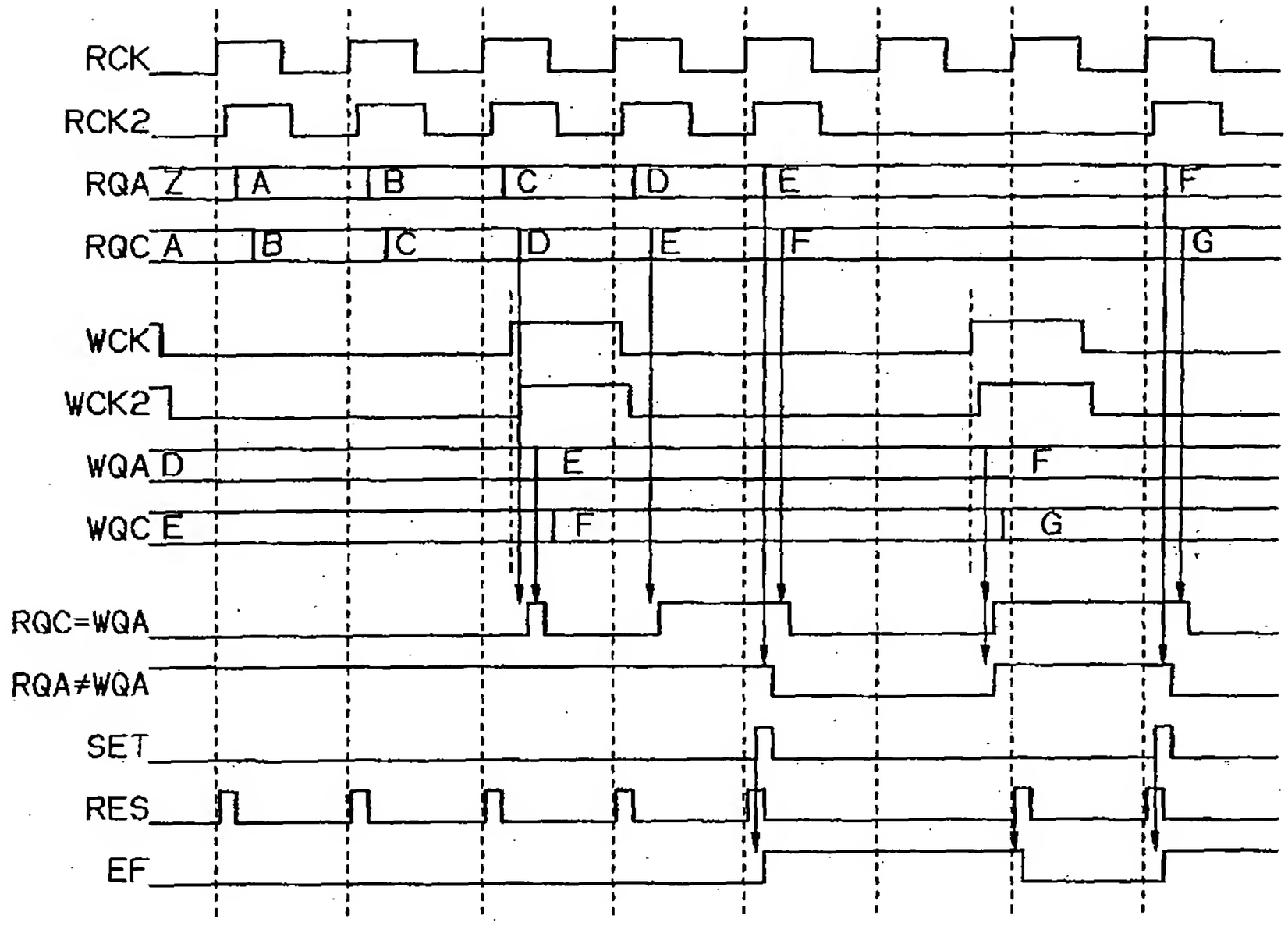
Fig.13



RCK	Read Clock
RCK2	Write Clock Controlled by the Empty Flag
RQA	Current Read Pointer
RQC	Next Read Pointer
WCK	Write Clock
WCK2	Write Clock Controlled by the Full Flag
WQA	Current Write Pointer
WQC	Next Write Pointer
RQC=WQA	Signal Indicating the Next Read Pointer and the Current Write Pointer Match
RQA≠WQA	Signal Indicating the Current Read Pointer and the Current Write Pointer Do Not Match
SET	Flag Set Signal of the Empty Flag Output Circuit
RES	Flag Reset Signal of the Empty Flag Output Circuit
EF	Empty Flag

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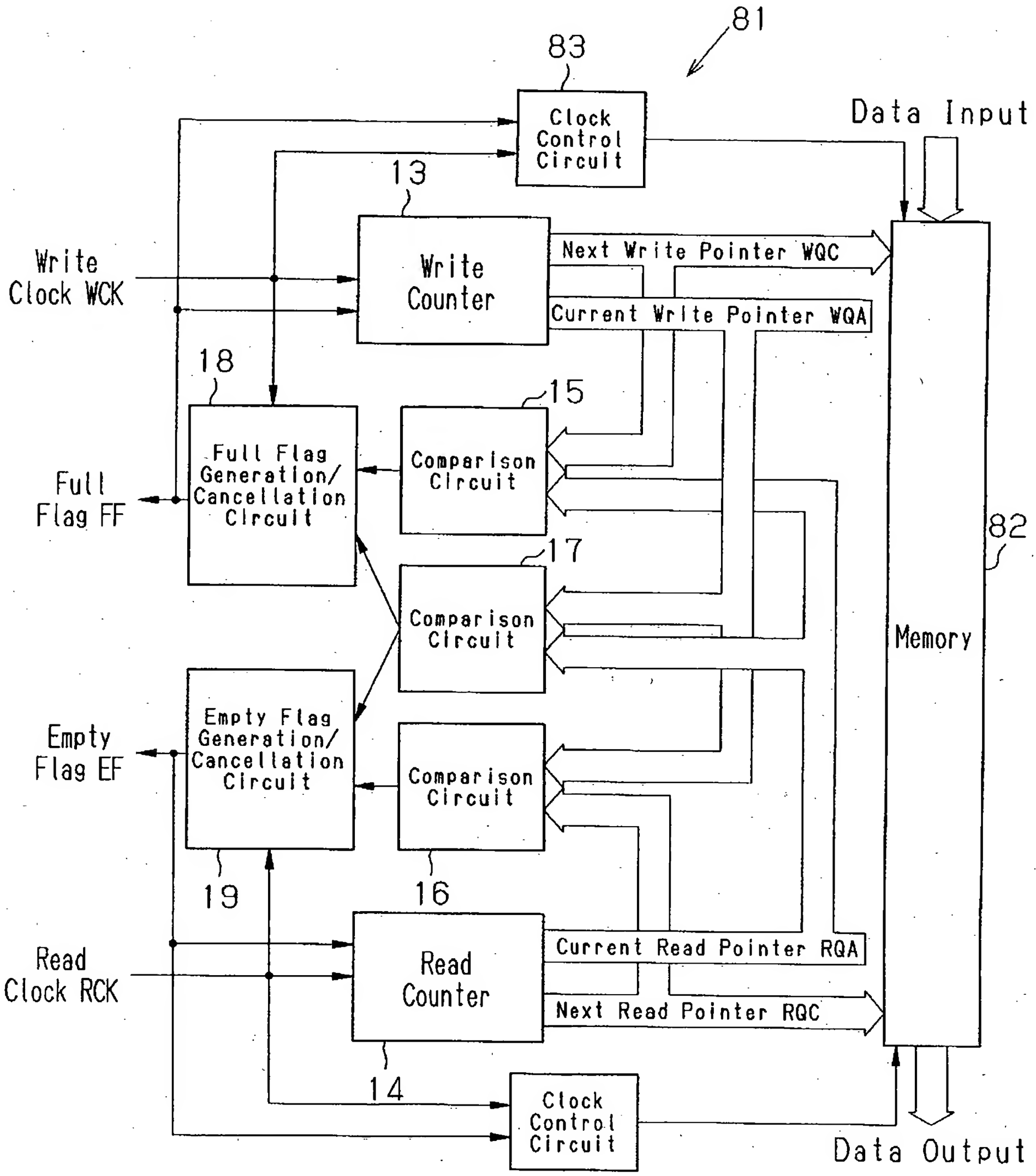
Fig.14



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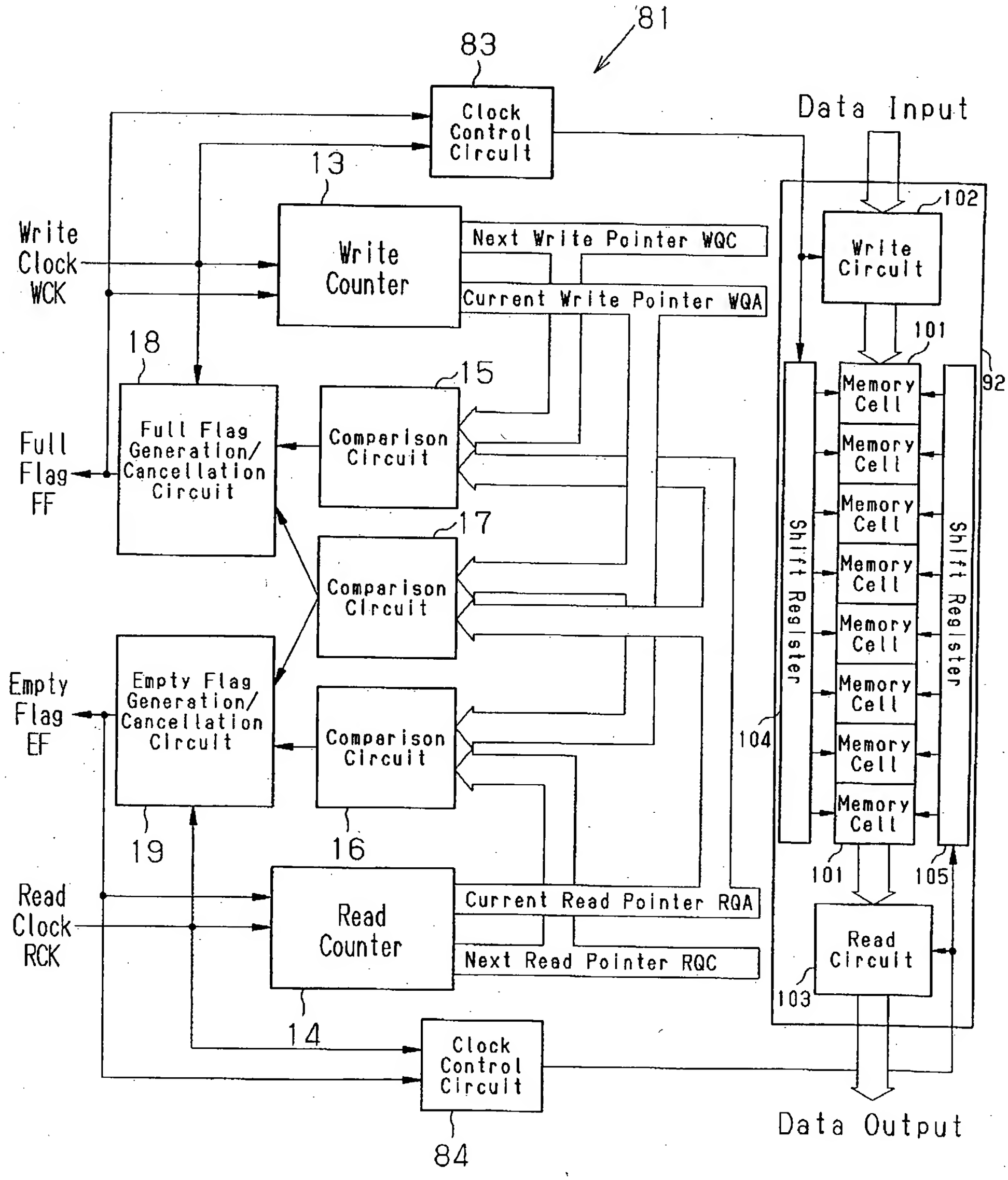
Fig.15